

A SHORT
ATTEMPT TO
RECOMMEND
THE STUDY OF
BOTANICAL...



Targioni Torretti Mire. 283.1-9

Indice del Tomo 66 misc. Scienz.
Nr. I. anon: a short attempt to recommend the study of Botanical analogy, in investigating the properties of medicines from the vegetable Kingdom.

2. Carradoni (Rovacchino) Sulla trasformazione del Noftoc, in Tremella wormeosa, in Lichen fapinularis, ed in Lichen rupeſoris. Pato 1797.

3. Carroddori (Rovacchino) Sopra varie trasformazioni della Tremella noftoc, e di alcune altre criptogame, e topazie. Loro riguardazione. Firenze 1798.

4. Icardelli (antonio) Postille ad alcuni capi della Storia botanica del Sig^r. Zannoni stampata in Bologna nel anno 1675.

5. Michetti (Eugenii) Lexicon botanicum, complectens nomina, synonyma, qualitates, ac celebritates dotes Lingulicium expositorum

6. Nolci (Dominici) in botanices com-

menelatigem oratio
7. Rambaldi (angelo) ambrosia
arabica, ovvero della Salutare Cearan
la Caffe!

A

SHORT ATTEMPT

To recommend the

STUDY of BOTANICAL ANALOGY.



A
S H O R T A T T E M P T
To recommend the
S T U D Y
O F
BOTANICAL ANALOGY,
In investigating the
PROPERTIES of MEDICINES
FROM THE
V E G E T A B L E K I N G D O M.

Si quid dixeris forte jocosius, hoc mihi juris
Cum venia dabis. Hor.

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M D C C L X X X I V .

Aug: Bruffone

T O

Dr. JOHN HOPE,
PROFESSOR of BOTANY and MEDICINE, in the University of EDINBURGH.

SIR,

IT would be a sufficient excuse for my presuming to ask your protection ont his occasion, that, from you, both my knowledge of botany, and zeal to promote it, were originally

nally derived. If the first efforts are weak and unsuccessful ; if the first fruits are crude ; time and attention may bestow greater strength, and a more complete maturity. You have already felt the pleasure of fostering and protecting the tender plant, and may recline under extensive shades, where you once found a comparative desart. May this be again your lot, for the author can truly say,

“ ‘Tis but to try his strength, that now he sports,
With Chinese gardens, and with Chinese courts !”

This

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This address is however more properly yours for another reason. It is well known that a natural method, the "primum & ultimum in botanicis desideratum," has been particularly the object of your attention ; and that, from you, we may expect something more complete than "fragments." If therefore the knowledge of the Materia Medica is improved from an attention to Botanical Analogy, the improvement will be more complete, as a natural method is brought to greater

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greater perfection. From you
then we expect it ; and from
you, we shall receive it with
gratitude.

I am, with great esteem,
Your most obliged, and
most humble servant,

Paternofer-Row,
Sept. 14 1783.

The AUTHOR.

A

SHORT ATTEMPT

To recommend the
STUDY of BOTANICAL ANALOGY.

THE most respectable physicians have frequently complained, that our medicines were too numerous; and have joined in wishing, that those which were less efficacious should be separated from others, whose effects were more considerable and certain. The different colleges, in their new Pharmacopoeias, have diminished the number

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of officinal remedies, and rendered their compositions more simple as well as more elegant;—but, like the heads of the fabulous Hydra, the endeavours to retrench occasion an increase. New medicines are frequently used, supported by the most extravagant commendations, and offered to the public as possessed of powers little short of infallible. If these praises were well founded, both science and mankind might boast of the improvement, and the *materia medica* would soon consist of a short catalogue of efficacious simples. It were an insult however on the reader, to recall to his remembrance the number of new remedies which were known only to be again

again neglected ; and it might occasion the unpleasing recollection of his disappointments, when he had built his hopes on the very uncertain foundation of specious promises.

In the hours of leisure and retirement, the author of this tract was induced to review the different remedies which had received their portion of applause, and were consigned to oblivion. It was not the work of an idle curiosity ; for it was probable that, in this neglected lumber, something valuable might still be discovered. Philosophers are often fickle in their attachments, but the remedy which had been for ages valued, was not probably destitute of merit. From the examination of

some neglected authors, which the courtly elegance of modern times turns from with contempt, he was induced to consider the different methods of investigating the powers of medicines, and to wade through the mass, which folly, fancy, and superstition, had collected, in expectation of some particles of gold. It is not the intention of the present work to pursue this laborious tract; but in the more luminous period of modern times, he was particularly attracted by the botanical analogy, and the remarkable agreement between the natural characters of plants, and their effects on the human body. Though there must necessarily be many exceptions, yet it

it appeared the most ready method of discovering the probable effects of a new remedy, and sometimes of checking the ardor of innovation, the fascinating recommendations which it had dictated, and a fondness for novelty had enforced. It is therefore the design of the present short attempt, to vindicate this method of investigation, which does not require the smoaky labour of the furnace, — the patient and painful, though fallacious attention to phials and mixtures, or the danger of a personal experiment. It will be a sufficient recommendation, if we find, in many of the classes of vegetables, a very general relation of their several powers, and, in the boasted novel-

ties of modern times, remedies similar to those which have been alternately admired and forgotten—cultivated and neglected.

In the present attempt, indeed, there are few pretensions to novelty. The famous English botanist, Mr. PETIVER suggested this method in the Philosophical Transactions; the laborious and accurate HOFFMAN pursued it; and the disciples of the LINNÆAN school have endeavoured to perfect it. Their attempts are respectable, and shall not be neglected in the present view of the subject: but much will still remain; and those, who know what they have performed, will be the best and most candid judges of what has been added.

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At the present era of Botanical knowledge, it might be presumed, that the term GENUS is sufficiently understood ; yet, though obvious, it has been misapprehended ; and though simple, misrepresented. Linnæus, to whom the world is indebted for the accuracy with which the numerous subjects of the vegetable kingdom are distinguished, has felt the vengeance which disappointed ambition can inflict. His works have been stigmatized as a grammar and a dictionary, when, in fact, he aimed at no more ; and he has been accused of stopping the student at the threshold of science, both by the useless obscurity of his language, and confining the views

of the naturalist to distinction only.. These accusations have been satisfactorily answered in other places ; and they would not now have been introduced, were it not to state, in opposition to them, one of the numerous advantages which his labours have bestowed. It will be obvious that SPECIES only exist in nature ; the various hues of the flower, the size and ramifications of the branches, are frequently changed by the soil and climate :—they are the sports of chance, for the vegetable, in its proper situation, returns to its former appearance. The first and most natural arrangement of the species forms what botanists have styled a GENUS. It ought indeed to
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be strictly natural; but, as the species are so numerous, an considerable licence has been allowed in this respect, in order to abridge the number of genera. Linnæus, who had examined plants with the most accurate and unwearied attention, found some reason to make them still more comprehensive, and to separate those of other authors, that he might form his genera in a more natural manner. This is the proper criterion of the merit of a naturalist; but, unfortunately, his numerous antagonists have been unwilling or unable to arraign his conduct in this respect. The patient and cautious philosopher sometimes finds reason to question the propriety of his

his conduct, but the same knowledge, which points out the apparent error, suggests the apology; viz. the amazing variety of nature, and the almost insuperable difficulty of confining her within the limits of a system. It has thus happened that the admirers of the Swedish naturalist have been distinguished for the extent of their acquisitions; and in the later period, when the terrors of innovation have subsided, his enemies have been only the vain—the ambitious—and the superficial.

It was necessary to state this imperfection, even in the first and apparently the most easy attempt to arrange the subjects of the vegetable

able kingdom, because it might, with some plausibility, have been urged against any argument which would derive the virtues of plants from their botanical analogy. But the objection would have been only plausible. Though the genera be in some degree artificial, it very seldom happens that the virtues of the species materially differ, except in degree. All the species of the Rhubarb are both purgative and astringent. The *Cincona Caribbæa* is a tonic, as well as the *C. officinalis*, and probably equally certain. All the species of the *Allium* possess the peculiar properties of Garlic. It would be endless to pursue this matter in all its varieties ; yet it

it is necessary to add one fact, which will clearly evince the propriety of attending to the genus; and it will equally show that soil and climate make a very slight alteration in the medical properties of the vegetable. The Seneka or rattle-snake root was much valued by the original inhabitants of Virginia, for its good effects in curing the bites of the snake, from whence it received its name, and as a very efficacious remedy in pleurisy, peripneumony, and other active inflammations. Mr. Tennent, with a very laudable industry, discovered the plant, and found it to be a species of the Polygala. The European species of the same genus was therefore tried, and its efficacy was.

was found to be very little inferior. The Seneka has indeed lost its credit; but the reason is obvious : as it powerfully excited vomiting, and its consequent evacuation by the skin, it was very well adapted to those diseases for which it was employed. The ardour of a discoverer overlooked this very probable cause of its efficacy, and attributed it to a specific quality in the root ITSELF.— Philosophy corrected the eagerness which had occasioned and supported this opinion,—till reflection suggested that we need not ravage the American continent, for an active and useful emetic.

The genus of *CONVOLVULUS* affords us a striking example of the medical

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cal powers pervading a natural collection of similar species. From this genus, we have the SCAMMONY—the TURPETH—the MECHOACANNA, the SOLDANELLA; and lately we have found that it affords us also the JALAP;—besides that, in its different countries, it is the most frequent domestic remedy of the native inhabitants. Another very comprehensive genus, which Linnæus has established, is the EUPHORBIA. It contains the species of the original Euphorbium,—those of Tournefort's TITHYMALUS, and the ESULÆ of Rivenus. They are various in their habits, and external appearance; but they are similar in their properties, for they are all lactescent, and
highly

highly stimulant. They were formerly employed as purgatives in dropsy ; but the violence of their action has deterred modern physicians from their use. Professor Guilandinus funk under their operation ; and, though Lister attempted to revive them, they were soon entirely neglected. We have chiefly mentioned this genus, because we know no one that is apparently more irregular and unnatural. It cannot fail of occurring to an attentive reader of the more ancient physicians, that all the old remedies for dropfies, were of this violent kind of drastic purgatives. The more gentle and timid modern is terrified by their effects, and probably often fails of relief.

relieving the patient, because he is more afraid of the remedy than the disease. It is illiberal to suppose that the ancients were cool deliberate murderers, and pursued a destructive course, without a proportional number of cures to console them for their many losses. When we see, in the course of successive ages, medicines of a similar nature employed, and varying only in their source, as vegetables or minerals, we ought to allow that purgatives are frequently, and perhaps generally, beneficial. It should therefore be our business to ascertain, with some precision, the circumstances which may regulate our conduct, and to determine in what cases, purgatives,

tives, and where the more gentle diuretics should be employed. After much attention to this point, drop-
pies seem to have been seldom effectually relieved without copious evacuations by stool ;—but it is also necessary to add, that this should be pro-
cured by the mildest means ; though when these are ineffectual, even the violent drastic of Dovar is sometimes of service. The attentive practitioner will always find that large and copious watery stools relieve the pa-
tient ; and, though their number may at first terrify him, yet the benefit which he daily receives will add to his confidence, both in the remedy and his physician — But we must return to our subject.

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The true ACACIA of the Greeks, the *ἀκακιον κυανωπον ἀκανθής* of Andromachus, has been long neglected, and would almost have been forgotten, if the name had not been preserved, by our retaining under the same title, the inspissated juice of the unripe floes. It was confessedly a very powerful astringent, frequently used in Egypt, both as a medicine and an ingredient in various œconomical preparations ; but, by the neglect of our merchants, or the prevalence of fashion, it has been long since unknown, and we have preferred the TERRA JAPONICA, which has, at least, the advantage of coming to us by a longer voyage,
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and perhaps at a greater expence. By the care of Mr. Kerr, who has long resided in the factory at Patna, we have, at last, received a description of the plant, from which the juice, in its inspissated state improperly called an earth, is prepared ; and we find that we have probably recovered a very similar remedy to the ancient acacia. The one is an extract from the **MIMOSA NILOTICA**,—the other from another species of the same genus. The names might have suggested as much to a dexterous etymologist; for *acacia* or *akatia*, without the Arabic prefix, *a*, is not very unlike *kaath*, *cate*, and *caetchu*.—But fortunately, amidst the various causes of confusion in medical enquiries,

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etymology has not found a place ; physicians are generally contented with observing a similarity of facts ; and when they are so happy, are often negligent about names. It may be proper to add, that the very useful exudation, the GUM ARAB. proceeds from the species of *mimosa*, from which the *acacia* was formerly prepared. It may therefore become necessary to enquire, whether the gum may not be procured from other sources, since we have now a *share* only of the trade, by the courtesy, and at the will of our former enemies.

It is unnecessary to inform the learned reader, that the GUM ELEMI, once highly valuable, is forgotten,

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while the **BALSAM OF MECCA**,— with its fruit and wood, are still carefully preserved in the East, and only resigned, through despair of obtaining them in Europe. We have been lately informed, that both these substances are the production of similar plants, included under the same genus. But the **AMYRIS OPOBALSAMUM** is rarely found even in Asia, and the **ELEMIFERA**, though it has been seen in Carolina and the West Indian islands, is also uncommon. There is a species in Jamaica which is less so ; and it may be of service to try its effects. We often wander to a great distance in search of remedies, which nature profusely offers at our own doors. The species

which I would recommend to the attention of travellers, is mentioned by many authors.—It is described by Sloane as “*Lauro affinis, terebenthifolio alato, ligno odorato can-dido, flore albo.*” This species certainly deserves a trial, by those who are still willing to trust a remedy which has been so much celebrated. Its virtues however, when separated from the exaggerations of superstition, are probably few; it seems to be a warm cordial and a diuretic; but, as it has been superseded by the less fragrant turpentine in the last effect, the former may be easily obtained by more agreeable medicines.

There are still many old remedies

dies which have been superseded by their kindred exotics. The ARISTO-LOCHIA LONGA and ROTUNDA are neglected, while we have lately purchased the SERPENTARIA from a very similar plant of the same genus, at a vast expence. A candid practitioner would be at a loss to point out the difference of their qualities, except in degree; and when he has actually tried them, perhaps would very willingly consign both the one and the other to oblivion. If we want a warm stimulant, we may readily find it in a less suspicious class.

It might be easy to extend this catalogue of foreign species, which we eagerly adopt, while our own climate furnishes others belonging

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to the same genus. The few that have been given, were not selected for their peculiarity, but as they might afford some entertainment to a speculative mind, who surveys the equal instability of literary fame, and of human greatness and power. They are sufficient to point out what is one of the chief objects of this slight attempt ; that botanical labours do not end in idle curiosity alone ; and that even the dictionaries of the science may suggest subjects of useful speculation. The reveries of our countryman sir John Hill, are probably yet remembered, and may involve the present attempt in the same ridicule. But our object is very different. It must be remembered,

membered, that, at present, we by no means wish to recommend our own simples alone : our superfluities enrich us, by employing our manufacturers to procure the proper returns ; but, if remedies are procured with difficulty, and at great expence ; if, as frequently happens in such circumstances, their condition is bad, and they are adulterated by cheaper and less useful materials, we ought certainly to turn our eyes to our own pastures, or those colonies which depend on us, and enquire how far we may be more certainly and conveniently assisted by them.

It is a more difficult task to point out the congruity in the natural orders ;

ders; they are necessarily more arbitrary, and the similarity is consequently less striking. If it be found however that the agreement is so great as to enable the most expert Botanists to arrange the several genera in the order of their powers, they may assist the student in his progress, and teach us to judge of the qualities of a medicine, when first offered to our notice. A complete natural method is the ultimate pursuit of the Botanist, but it is the universal medicine, or squaring the circle, a proposition physically impossible. This will be obvious from a slight reflection : our limits of classes and orders are the consequences of our imperfect knowledge ;

ledge ; nature proceeds by degrees, and from the cedar of Lebanon to the hyssop which groweth on the wall, there is no part at which the line of division can be drawn with propriety. In the infancy of our knowlege of nature, many families of plants were readily distinguished, and they remain at present useful monuments of our presumption and our imperfections ; for future discoveries have filled up those chasms which occasioned the division ; and we must either reject the plants from our system, or those limits which we fondly imagined were dictated by nature. It would be no very difficult task to shew that an arbitrary arrangement is better suited

ed for the chief purpose of a system, viz. distinction; while the natural classes might be preserved, with all their imperfections, as some guide in the discovery of the nature and properties of vegetables. Linnæus, who has derived his greatest praise from an artificial method, yet eagerly pursued a natural one, which he calls “ *primum & ultimum in Botanicis desideratum;* ” but from its necessary imperfections has modestly styled his attempts, Fragments. It is from these fragments therefore, that our future observations will be deduced; and though there is much uncertainty, and some contradiction in several parts, yet there is sufficient information to be derived
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from them to encourage the pursuit. It will at least serve to increase the knowledge of nature, and to extend our enquiries concerning the properties of many vegetables, which have been hitherto misunderstood or neglected.

It may be objected, that we already possess an extensive catalogue of medicines, whose properties have been ascertained : that these have been arranged in various elegant systems, which have frequently attracted the admiration of the student, and the contempt of the practitioner. Diseases, in fact, are not cured by systems ; and these splendid monuments of mistaken talents, and misapplied industry,

dustry, frequently mislead us. Every medicine undoubtedly possesses some distinguished powers, which will support the author's opinion in its arrangement, and give the appearance of accuracy as well as of elegance. But there are various circumstances, which will influence the choice of the medicine, from its inferior properties : these are, in such systems, little attended to; and it also possesses powers, for which in emergencies it may be used, when we have little choice of the methods to be employed. Those who have found ALUM, in their systems, among the astringents, will not readily think of it as a purgative ; and where the POLYGALA is reckoned only

only an expectorant, it will not be readily used, even in the most urgent situations, as an emetic. But I am by no means willing wholly to discard these arrangements—they are probably useful both to the teacher and the student; yet they may be properly regulated, by inducing the learner to look beyond them, and by showing him that they are the means only, rather than the end. They give a general and comprehensive view, which is afterwards to be varied and enlarged. They are the definitions and axioms of the geometer; the foundation indeed of every astronomical calculation, but never thought of since the days in which the study of Euclid commenced.

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But whatever may be the merits of these systems, they will not preclude our present attempt. These are the result of observations already made ; this is a guide only to a cautious trial : the former is the consequence of established facts ;— the latter leads us to establish them. The imperfection of this method, for it is confessedly imperfect, has led many naturalists to suggest the trial of tastes and smell.—These therefore have been diversified beyond the powers of language to ascertain their difference ; but in their event are uncertain, and sometimes dangerous. The taste and smell, may be, with propriety, combined with the botanical analogy, but neither

neither can entirely supersede the other.

Perhaps it may not be wholly useless, to give a short account of the later systems of this kind. They possess a degree of clearness and accuracy, which will scarcely be expected in a subject so doubtful and uncertain; while, at the same time, they will, in some degree, assist the principal object of this attempt. It were easy to fill this tract with the reveries of authors, and to copy pages of sounding trifles; but, as Sterne wished to speak a few words point blank to the heart, so we shall principally aim at the understanding. Both may fail, but the attempt is commendable.

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The division of tastes, by which we discover a discriminated permanent property in the body possessing them, is the following. The *watery* and *dry*—the *viscid* and *salt*—the *sweet* and the *acrid*—the *acid* and *bitter*—the *fatty* and the *styptic*. The watery taste is well-known: the chief examples are the oleraceous plants. The *dry* is perceived in the ivy—the capillary herbs, and particularly in the seeds of the lithospermum, which Grew informs us effervesce with acids. But from the first division we gain little information. All vegetable food is gently laxative, it is also slightly nutritious and cooling; so that vegetables, which possess few other distinguishing

guishing properties, are sure to agree in these. There are many, however, which fill the herbals of the curious, which possess no superior merit—their virtues are detailed with care, but they are so slight, that we may safely neglect them. Their opposites, the dry substances, have still less power; indeed, except by absorbing acrid humours on the surface, and, in a single instance, if Grew's solitary experiment be true, by destroying acidity in the stomach, we receive little benefit from their efficacy.

The viscid and salt are not so justly opposed. The former is exemplified by the gums and the mucilaginous vegetables; but their only

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property is that of a demulcent.—The common salt externally is a simple stimulus, internally laxative.—It requires many other circumstances to concur with its action, before it can with justice be accused of producing the sea-scurvy and malignant ulcers ; yet there is no other example of this taste.

The sweet taste is sufficiently known, but it adds little to our information ; for between the praises and the censures of sugar, reason can with difficulty decide. It is therefore probable, that it deserves neither, in a considerable degree. In a moderate quantity it is nutritive, and, when slowly dissolved in the mouth, demulcent ; but we can add

add little more; for all the sweet vegetables seem to possess no very different qualities. The laxative power of brown sugar, manna, and casia, probably depend on the mixture of some oily or resinous matter of the vegetable to which they belong; for it is diminished in the same proportion as the purity of the sugar is increased. Its most proper opposite is the acrid—the onions, spices, mustards, and warm stimulants of our own climate, are the examples of this taste. They are all stimulants, and some of them highly useful in this view; so that this quality is generally the most exact test of a stimulating power. But they are also distinguished by other qualities,

qualities, for they evacuate the fluids from different glands. To properly examine this subject, might too far extend the present tract, but we should probably find, that no taste of this kind will justly indicate any evacuating power, except that of onions. The whole tribe are powerful diuretics, sometimes expectorants, and in a few instances slightly laxative.

The acids, for in these instances we are chiefly confined to the vegetable kingdom, are no less distinguished for their taste than for their properties; but these are sufficiently known. Their opposites, the bitters, scarcely deserve more attention; but there is an obvious difference

ence in the several subjects of this class. The common warm bitters are tonic and stimulant; but there are others which are highly narcotic. Opium is of the latter kind, and the common bitter, hops, approaches towards it. The tansy, the wormwood, and many others, possess this quality in a less degree. But when the qualities are different, in general the tastes can be distinguished, though there are some substances in which these different kinds of bitter seem to meet so nearly, that it is not easy to say to which they belong. It has been supposed, that every substance of this kind is in some degree narcotic; for the continued use of bitters fre-

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quently destroys the tone which they were intended to support or restore. The purer bitters, the gentian and centaury, certainly possess a small portion of this hurtful quality : those joined with a slight aroma are probably more safe and salutary. The myrrh and the cascarailla, the simaruba and the columba, both from their taste and their botanical analogy, as far as has been discovered, are of a doubtful nature. It is not intended to depreciate their merits, for there is some reason to suspect that they owe their medicinal virtue to those qualities which we have just mentioned. There is however some foundation for the caution which has

has been given not to continue their use for an extensive period.

The other tastes are the fatty and the styptic. The former is easily distinguished; for it is the unctuous insipidity of pure oil which is generally demulcent, and in a larger quantity slightly laxative. De Haen has endeavoured to extend the virtues of oil, by using it in peripneumonies; but as few stomachs can retain the necessary dose, we cannot enlarge on its expectorant powers. The oil from the liver of the cod-fish evidently owes its efficacy to the animal matter contained in it, and makes no part of the present subject. The styptic is frequently a compound taste; sometimes, when it

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approaches to the acid, called *austere*; and, when it is nearer to the bitter, *acerb*. They are generally powerful astringents.

It will be obvious, from this review, that the knowledge which is obtained by the taste, must be very general, and capable of suggesting only a probable opinion of the leading qualities. It would never have pointed out the purgative powers of jalap, or the emetic effect of ipecacuanha. The most active purgatives, the scammony, gamboge, elaterium, and colocynth, will either discover few sensible qualities, or mislead by those which they possess. On this account Linnæus had added the *nauseous taste*, which is the pecu-

peculiar property of the more violent cathartics, and some others. But this depends so much on different constitutions, that every substance, even in the extensive catalogue of the ancient *Materia Medica*, would by many be considered as belonging to this class. It will be obvious, that it can be of little use in the investigation of the properties of medicines.

There are seven kinds of sniells ; the ambrosial, of which mosch is an example ; the fragrant, or the flowers of the jasmin ; the aromatic, or those of the pink or laurel flowers ; the alliaceous, the onion or assa foetida ; the goatish, as the orchis, or herb robert ; the foetid, as

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the hemp and opium ; and the nauseous, as the hellebore and tobacco. The aromatic and the fragrant seem to indicate a stimulating power ; but in general it is slight and transitory. The fœtid and the nauseous are sedative ; but the latter is frequently emetic and sometimes cathartic. The goatish smell does not point out any useful property ; and the alliaceous agrees in its powers with the substances whose tastes have been denominated *acrid*. This is nearly the substance of the boasted knowledge which we possess from those sagacious sentinels which are said to superintend our conduct ; and diligently inform us of the approach of any noxious power. It will not
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be therefore presumptuous to suggest a method which promises more useful assistance; for even the most strenuous advocate of the former systems, will either acknowledge their inefficacy, when generally extended, or allow that they may with propriety be strengthened by the assistance of botanical analogy. The charge of imperfection may be probably retorted on the present attempt—but it is some merit to have pointed out a path to general attention, which had been formerly overlooked. This is all our claim, and we shall join in the just applause due to those, who by their diligence will pursue it, and render it more useful.

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It would be superfluous, at this time, to make any observations on chemical analyses. The French academicians have tortured every medicine to make it confess its virtues; but with very little success: each was obstinately silent, or gave such vague uncertain intelligence, that the chemist retired in despair. We are told by one of this society, that two thousand experiments had been tried; and they found only a little acid, essential, or empyreumatic oil, in different proportions; a fixed and volatile salt; a quantity of insipid water, and earth. The very same proportion of these different parts was often found in plants of very different qualities.

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As all our guides have been hitherto so faithless, there is little danger in trusting to one, who pretends not to infallibility : in the dark, a blind man may conduct us with safety ; or, if he fails, will at least be able to assure us, that it did not arise from the deficiency of his optics. Botanical analogy may indeed sometimes mislead ; and in every part of medicine it is of consequence to know, that we do not trust to any thing more certain : but to point out imperfections, is the first step in removing them. In enquiring therefore into the virtues of a plant, it will be necessary to mention particularly the parts of it which we wish to examine. Our

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common potatoe, though an esculent root, at least wholesome, and once reported so highly nutritious, and even stimulating, as to have excited the following wish in Falstaff; “ let the sky rain *potatoes*, “ hail kissing comfits, and snow erin-“ goes: let there come a *tempest* of “ *provocation.*” This common root is part of a solanum, and the taste of the leaves renders it highly probable that they partake of the deleterious qualities of its genus. The seeds and leaves of the peach-tree are narcotic bitters; while the fruit is wholesome and cooling. The seeds and leaves of the lemon are bitter; the peel more aromatic; the fruit acid.

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If then we examine the place of our more common medicines in their natural orders, we shall be surprised at their vicinity, to others of a similar quality. The RHUBARE, for instance, precedes our common dock ; and the old *monks rhubarb* was really taken from the latter genus, — the *rumex alpinus*. The hellebore stands in the same class with the aconite, the nigella, and the pulsatilla. The ADONIS, which was probably the hellebore of Hippocrates, joins very nearly to our common hellebore, and to the anemone, a plant of similar qualities. The solanum, physalis, hyoscyamus, datura, and belladonna are in the same class : the digitalis,

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lately introduced to the *Materia Medica* by the college of Edinburgh, appears to have similar qualities. If we enquire into its virtues, from its botanical analogy, we shall find that it is probably poisonous, and therefore to be used in small qualities;—that it is of the narcotic kind; but that, as some of the class are diuretics, particularly the *Nicotiana* and *physalis*, if it resembles them, it will probably be an active and powerful medicine of a similar nature.—Future experience will determine the propriety and justness of our suspicions. The *cincena*, which produces the Peruvian bark, is connected with plants, whose virtues are yet unknown. The
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qualities of the *Ionicera* and *dier-villa* lead us to suspect that they are similar. They are certainly bitter and astringent.

As we have mentioned a few of the facts to shew that our pursuit, like that of many others, is by no means wholly visionary, we shall consider the different natural orders, as they occur in the *Philosophia Botanica*. The first class are called from their effects *piperitæ*. They are all, as far as we are acquainted with them, warm, generally aromatic, and sometimes corrosive; it is therefore probable, that the *saururus* and *pothos* are similar. The latter is commonly called *dracontium* or *arum*; the former resem-

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bles the serpentaria. The palm trees constantly afford an esculent fruit, and the medulla is frequently nutritious. From the scitamina we have the zedoary, the ginger, cardamum, amomum, grains of paradise, galanga, and costus. They are all warm stimulants, though they differ in degree. The orchis and its companions are highly nutritious. The iris is the only one of the following order, whose virtues we are acquainted with ; and we find its different species emetics, cathartics, or expectorants. But these are probably the consequence of the same quality, in different degrees ; we see it in ipecacuanha, in the gratiola, and in antimony.

timony. We are not acquainted with the several plants with which the squill is arranged, and consequently cannot compare their virtues; it is certain however that many of them are highly acrid. The roots of the lily tribe are emollient and nutritive. The tulip root is said to have been eaten ; but not in Holland.. It would certainly be there a capital offence; though the harmless Italian indulges himself in it, unmolested. All the grasses are nutricious, except the lolium, of which one species has acquired the epithet temulentum, from its effects; but these are lost in dressing. The lesser seeds are the food of birds ; the greater, of cattle and of men.

The following class, the CONIFERÆ, are very generally of a similar nature, which will be fully understood, from reflecting that the pine, the source of the turpentine, belongs to it. This very common and useful medicine is too much neglected, at least under its proper title; but the different turpentines, and some of the balsams, are very generally adulterated with the product of the common fir.

If any one has followed this little tract with the *Philosophia Botanica* in their hands, a degree of distinction which it will probably never attain, so that we need not have said a word on the subject: if however they have done it, they will find

find several classes omitted; but they will also observe, that they do not furnish a single medicine whose efficacy is sufficiently decisive to enable us to compare its companions with it, and, from the comparison, to determine its properties.—Yes, says a minor critic, fresh from his dispensatory, there is the *juncus odoratus*, a powerful ingredient in the mithridate and theriaca: but he ought to be informed that this is really a species of the *andropogon*. It will not be always easy to answer every caviller, who may think his opinion of consequence; and the author has little ambition to make a volume, which would certainly be the effect of considering, in a par-

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ticular manner, *sixty-seven* classes. A few of the most important circumstances therefore to confirm the opinion, which is the object of the present tract, will be selected from the numerous facts suggested by the fragments..

The whole class distinguished by the horned antheræ, styled BICORNES, are astringent; and those which bear berries, produce acid and esculent fruit. There seems to be a strong connexion, in vegetables, between the acid and astringent principle; for where the former is observed in the fruit, the latter is generally conspicuous, either in the bark of the plant, or of the root. It is not easily explained; since, in many instances,

stances, a bitter destroys acid almost as effectually as an alkali. Some authors have supposed, and, if we mistake not, it is an opinion of the Linnæan school, that the acid is a component part of the vegetable, obscured indeed, in the bark, by the superabundant astringency, though again evolved in the fruit. The fact is certain, whatever may be said of the explanation: the most striking instances are the *vaccinium*, *erica*, and *arbatus*; but the twenty-fourth order scarcely contains a plant which properly opposes the opinion.

Ray, who was rather inclined to think any attempt similar to the present, a fanciful innovation, yet allows

allows that his VERTICILLATÆ are generally aromatic ; at least, he observes, that there are more plants of this kind in that order, than of any other. The STELLATÆ of this author, are generally said to be diuretic : the rubia, the aparine, and gallium indeed procure this evacuation in a slight degree ; but there is a sedative power, in many of its individuals, which have rendered them useful antispasmodics and anthelmintics. The Indian pink, when recent, is certainly sedative ; and the coffee, though its powers are increased by roasting, is naturally of a similar quality. The famous specific of the Indians against deafness, the *auricularia* of Dale, belongs to

to this order, and once excited much attention. Marlow, from whom Dale received his account, left no description of the plant, and Dale only saw it among his specimens, and found that its odor resembled that of the water-mint. Sloane, on this slight foundation, concluded it to be a species of melissa. Ray, with little consistency, reduced it to the " *mentha aquatica Ceylanica INODORA LATIFOLIA*" of Herman, though it was first found to belong to the mint, by its smell alone. On examining however the *real* Herbal of Herman, it was discovered under the title of *valerianella*, with *oblong* leaves ; and proved to be a species of *hedyotis*,
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and to belong to this class. This account, taken from Hasselquist, is not a bad specimen of the labour of a naturalist, lost in the wilds of conjecture, and a sufficient proof that the most extensive knowledge of the subject, will not supply the deficiency of real facts. It was this which made Linnæus consider the simaruba as a species of bursera, the ipecacuanha as an euphorbium, and the jalap as a mirabilis. If he has so often failed, we may with justice distrust ourselves; yet the fault may be neither his or ours, but the effect of the limited powers of the human mind, which, as well as those of the body, require constant exercise to render them perfect. The naturalist seldom

dom fails in the extent of his memory, or the acuteness of his observation ; though he is sometimes deficient in his reasoning or his judgment. The hedyotis, so dear to those who eagerly seek for, and highly prize specifics, is probably only an antiphlogistic, slightly laxative and diuretic, with some peculiar sedative power. Its use in deafness, we can easily understand, since the chief diseases of uncultivated savages are inflammatory. If the polished European endeavours to find, in it, a remedy, which will secure him from the effects of intemperance or dissipation, he will, as usual, be disappointed ;—but to return.

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The asperifoliæ of Ray are slightly astringent, and frequently mucilaginous. These united qualities have contributed to give them the title of vulnerary ; and, on this account, the list of Materia Medica is crowded with remedies of a similar nature. They are generally of little consequence ; and the judicious physician would resign, without a sigh, every medicine contained in this order.

The various acrids, or rather stimulants, which resemble common mustard-seed, also resemble each other in their botanical appearances. Even in the sexual system they are connected under the title of Tetradynamia, and in the fragments they are

are called Siliquosæ. The lepidium, cochlearia, raphanus, cardamine, sinapi, erysimum, and sisymbrium, are in general well known. The rest are stimulants in a less degree, and there is no poisonous plant in the whole order.

The Papilionaceæ afford in every instance, seeds which are the food of different animals; the Columniferi are universally mucilaginous; and the Icosandria, which compose the thirty-sixth, thirty-seventh, thirty-eighth, and thirty-ninth orders, have generally an esculent fruit, without even the suspicion of poison, unless, perhaps, in the winter cherry.

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It is necessary to mention an obvious, and apparently a powerful argument, in opposition to the mode of investigation, which it is the object of this tract to establish. The cascarrilla—the rival of the Peruvian bark, is found in a poisonous class, of which the greater number are drastic purgatives. It would not be difficult to extract from those authors, who opposed its progress, when it was introduced by Stahl, as a more safe and useful medicine than the bark, sufficient proofs of its suspicious tendency. There is however, little probability, that it is highly hurtful. Its aromatic fumes have produced fainting; but it is very far from a noxious remedy, and

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particularly unlike its companions in having no cathartic quality. But though botanical analogy may not be an unerring guide, it may still be useful ; and many circumstances may have occasioned an error. It is possible that its genus may be still mistaken ; or, if it be not, that other parts of its tree may be poisonous. The berries of another species, the croton tiglum are highly acrid and cathartic ; while its wood, the pavanæ lignum vel Moluccense is mild and manageable. Catesby too calls it ricinoides, though the leaf is very different ; it is therefore probable that the seeds resemble those of the ricinus, which, when

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eaten without any preparation, are highly acrid.

There are many greater difficulties which a system-maker easily answers or eludes; and the suggestions just mentioned may probably be considered in this light. The fact was mentioned however with a different view, to point out a probable exception; and to show, as usual, that rules can seldom be deemed universal. The suspicious nature of many bitters was formerly mentioned, so that it is needless to repeat them; but there is a natural class of plants which are generally bitter, and almost universally astringent, viz. the dorsiferæ, or ferns, that are justly suspected as deleterious.

ous. It may appear ridiculous to argue, that a plant which poisons a worm in the intestines, may also poison the person in whom it dwells; but, independently of the arguments which may be drawn from the general nature of animal life, we shall probably find all our anthelmintics of a poisonous nature. Arsenic and tin are sufficiently known; mercury and the other minerals will be allowed to possess this quality; for poisons do not differ from medicines in their power, but in their doses. The helleborastrum or bearsfoot, is a species of Anemone; the spigelia is suspected both from its class, and its properties, when recent. The antheræ and the seeds

of the aquilegia are highly bitter, and often hurtful. The ferns themselves are poisonous to the tænia. When Madame Nouflers' remedy was first published, it was ordered, in a celebrated hospital, with the usual drastic purgative; but, as the ferns were not an officinal, and could not be immediately procured, the latter was given for some time without the former. Many annuli of a tænia were evacuated, which were evidently alive;—they moved spontaneously, and contracted when stimulated. But, after the fern-root was given, they were discharged, in a larger quantity, without any mark of life remaining. The patient grew cachectic, and was obliged

lized to go into the country. It is not certain that these consequences arose from the ferns; but it is certain, that though a remedy of some reputation as a splenic, it is disused, and expressly, as is observed we believe by Vogel, from its having produced some dangerous symptoms.

It is not intended that these observations should induce practitioners to despise bitters, because they may be hurtful. They are certainly generally beneficial in the usual doses, and at proper times. It is however intended to guard them from using bitters during an extensive period, without intermission; for, if they possess any noxious powers, in this way they will be principally

cipally observed. If the physician purposes to neglect the narcotic bitters, he will find it very difficult to select them; for it is highly probable, that some quality of this kind resides in all. An ingenious friend, who has looked over this little tract, has suggested, that, from this quality only, their reputed tonic power may be derived; and that, instead of restoring tone, they only destroy irritability. This position must defend itself; and it is only necessary to add here, that, in the choice of bitters, those probably are to be preferred which are combined with an aromatic principle.

It is not only the habit of the plant, the position or the structure of

of its flowers, which are sufficient to fix its place in a natural system : its situation and other particulars are usually, and with propriety, mentioned ; so that they ought also to influence the opinion which we form of its virtues. In moist places, plants are generally very acrid, and often poisonous ; but the same species, when removed to drier soils, are warm and useful stimulants, antispasmodics or carminatives. It may seem surprising, that an aliment so mild as water should nourish vegetables, which are peculiarly acrid. Yet water is almost the entire food of every vegetable ; and it is most probable that in these, as well as in animals, what are called

production and increase, are only different periods of evolution. The water therefore does not produce this acrimony; but peculiar plants, which require a large supply of this liquid, acquire in a moist soil a greater degree of strength and luxuriance, and possess, in their favorite situation, their virtues in greater perfection. We do not want examples of this fact: the arum aquatum, the colocynth, the Perficularia urens, flammula Jovis, anthora, gratiola, the esula palustris, the ginger, and the eupatorium, as well as a great variety of others which are neglected on account of their too great activity, are chiefly found in moist situations. All the umbel-

umbelliferous plants of this kind, possess very acrid or poisonous powers; but, when removed to a drier soil, become useful medicines. The galbanum, the opopanax, the *assa foetida*, angelica, cummin, and master-wort are entirely of this class. It will be obvious that the rule, which is derived from the situation of vegetables, cannot be universal; but that highly acrid plants arise in elevated and dry situations, while some watery ones are mild and mucilaginous. In general, however, the proposition is true; and, though there are many exceptions of the former kind, there are few aquatic plants which are not acrid in some of their parts. There is a more exception-

able rule derived from authors of real merit, and among the rest from Hoffman, that the stimulant, aromatic, and astringent vegetables chiefly flourish in a dry poor soil; while those which are narcotic and poisonous, are chiefly found in rich and moist earth. There are certainly many instances of both kinds; but there are also many exceptions. Yet it is worth recording, as every circumstance which will tend to limit or correct the wanderings of an uncertain traveller, may be sometimes useful.

But there is another class of plants, which must still be mentioned, though their peculiarity depends neither on their habit or
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their situation, but on their juice : this is the class of MILKY plants. They are generally acrid, and sometimes poisonous ; the euphorbia, the apocynum, cambogia, and asclepias, are sufficient examples of this quality ; but the lettuce, the hawkweed, the dandelion, and some others, though milky, are much less acrid. These are almost entirely the plants distinguished by Tournefort, under the title of SEMIFLOSCULOSÆ, and, except a few species, as for instance the wild lettuce, lately recommended for dropfies, if not mild, they are by no means dangerous. The exception therefore is so precisely limited,

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that it scarcely diminishes the value of the general rule.

The facts which have been mentioned, are probably sufficient for the purpose of the present tract, and will induce physicians to attend more to the botanical analogy than they have hitherto done. It has been observed, that the attempt to deduce the virtues of plants from their botanical appearances, is as visionary as to find the philosopher's stone, or to square the circle. It is chiefly to obviate this objection, that these observations are now published. If the attempt is not entirely groundless, more extensive knowledge, greater opportunities, and more leisure may contribute not only

only to rescue it from contempt, but to render it really useful. From Dr. Hope and Dr. Pultney, much may be expected; and if this little work sharpens their tools, the author's time and attention will not be wholly lost. He will be content to be the mere whetstone, if he can excite superior abilities to undertake the work.

In this age of new remedies, the author may probably be indulged with a few reflections on the state of the **Materia Medica**, the accumulated labor of ages, the heap collected from the rubbish of folly, prejudice, and superstition, with a few valuable particles, the result of real attention and accurate observation.

tion. There are two kinds of remedies which form the extremes of the scale ; the inactive or inert, and the poisonous. The classes of stimulants and astringents are very extensive ; and there is scarcely an object, connected with either, which cannot be amply supplied from those in our hands, and from those in frequent use. It may seem surprising, that many of our new remedies are still of the latter class ; we may mention the Quassia, the Simaruba, the Cortex Indicus Lopezianus, and probably the Columbo. If we except the last, which is a useful medicine in some slow fevers, it is not easy to say what valuable end can be obtained by either of these,

these, which the common officinals of the same nature cannot supply. And even the columbo is often successfully superseded by the myrrh, or sometimes by the common chamomile flowers. On the contrary, the class of poisons have been tortured to afford useful medicines, with little salutary effect; yet we now see the digitalis again recommended, under the sanction of a very respectable college. We ought not to object to a medicine, whose properties have not yet been experienced; it has already been mentioned, with some conjectures relative to its effects, if its very nauseous and acrid taste will permit its exhibition in a sufficient dose. The
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henbane, the *hyoscyamus niger*, is indeed an useful sedative, and frequently, in large doses, a laxative; but experience has taught us to disregard the other medicines of this kind, for they are frequently injurious, and seldom useful. Even this remedy is frequently despised, because its usual form, the extract, is often injured in the preparation. The seeds are not however liable to this defect; and those who will attend to the present pamphlet, will attend to the directions of a person who has frequently employed them, and generally with success. It may be necessary to add, that the first dose of the seeds is a grain, which must be gradually augmented so far

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as the head and stomach will permit ; that the diseases, to which they are adapted, are, those proceeding from too great irritability, particularly in the stomach and bowels.

The useful medicines are therefore those of the middle kind, whose effects are neither so violent as to endanger the health, which they are intended to restore, nor so slight as to occasion loss of time in expectation. If these are examined from their botanical analogy, we shall frequently be in little doubt concerning their real virtues. It will not surprise us that this method has not yet been found very effectual, for we lately were ignorant even of

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the true species of the Rhubarb.—To the younger Linnaeus, in his supplement, published only in 1781, we are indebted for the botanical description of the plants which produce the Balsam Peruv.—the Benzoin,—Cubeb,—Jalap,—Ipecacuanha,—*Quassia amara*,—Simaruba, *Rhododendron crysanthemum*, — *Santalum rubrum*, — the common Nutmeg, and some others. To the late Dr. Fothergill,—to Mr. Ker of Patna, and to other attentive observers in India, Carolina, and Jamaica, we owe much information within these fifteen years; so that this subject is still almost in its infancy; and the natural method of arranging plants, has been more admired than culti-

cultivated. We are yet ignorant of many plants which have afforded us useful medicines, as the Ammoniacum,—Myrrha,—Gum Kino, &c. and there is much reason to suspect, that those already supposed to be known, have, in some instances, been mistaken, and really belong to very different genera.

The number of remedies have been considerably increased by the eagerness of physicians to find specifics. To the untutored savage we owe several valuable ones; and we fondly cherish the delusion, that he has still greater treasures in store. It is necessary therefore to observe, that no remedy deserves that title; and, when we are better acquainted

with those which have attained it, we generally find that they act on general principles, and that their virtues differ only in degree from those which we have constantly employed. In the *Amænitates Academicae*, we have however a dissertation on the specifics of the Canadians, which contains near forty species. We ought not to say that these are not worth our attention ; there may be some valuable remedies among them, and they deserve farther examination ;—but we can venture to prophecy, that every individual will be readily reduced to the classes we are already acquainted with, and that no one real specific will be found in the number,

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Remedies of this peculiar nature, are the very foundation of every empirical system, and they are the refuge of ignorance and idleness. It is probable therefore, that our charms will not have much effect. Specifics will still be the ignis fatuus which will mislead the accurate enquirer, and perplex the rational physician.

But the *materia medica*, as well as medicine in general, has suffered from different and opposite errors. If the virtues of remedies have been sometimes too much confined, at others, they have been considered as too general; and physicians have formed classes, before they have examined individuals. The arrangements.

ments of the earlier authors, were in many respects defective ; those of the latest and most judicious moderns are so comprehensive, as frequently to mislead, or, at least, to afford little satisfaction. If a medicine is classified from its effects in health, it must often be arranged very differently from its effects in disease ; and probably its title will sometimes vary, as the disease changes. Blisters, for instance, stimulate, yet they frequently produce sleep ; and opium is a sedative, though it often increases pain. There is therefore no criterion, by which we can always determine the place of a remedy ; and the student who only consults his system, will frequently produce effects

effects very different from those which he wished for. Another objection will also occur to an attentive observer ; viz. that medicines often possess more than one quality ; and, though the principal and predominating effect generally characterises the remedy, yet, in many instances, it is not easy to discover it. Camphor we know, is frequently an useful expectorant ; in other situations a proper sedative ; yet in the end of fevers it appears to be a necessary cordial. In what class then, can it be with propriety arranged ? Among the sedatives ? It will not ease pain, it will not procure sleep, it will not always check any extraordinary discharges. A-

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mong the expectorants ? We shall in vain trust it in the fit of an asthma, in a serous catarrhal defluxion, or in the consuming ulcer of a phthisis. It is useless to multiply instances ; for, though this be a very peculiar medicine, yet almost every other, when examined with precision, will afford equal difficulty. The sum then of the whole is, to recommend an attentive examination of individuals, and to begin with lower orders, rather than at once to form extensive classes ; to arrange a few together, whose properties are similar, and to connect the higher arrangements by their more general agreements ; in short, to form genera and orders, before we ascend

ascend to classes. We have already given some instances of this kind in our observations on astringents. The columba root and myrrh seem to agree in diminishing irritability ; the cascarilla and bark, in restoring tone ; and both are adapted to fevers in their different forms. Again, there are some astringents which are useful vulneraries ; and there are others, nearly allied to them, which are powerful styptics ; not to add, because it has been already insisted on, that the limits which divide the astringents from sedatives, are narrow and incon siderable. In the list of sedatives, there is a great difference between those gums which correct

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flatulence and convulsive motions in the bowels, and opium, which, in large doses, seems to check all the vital and animal actions ; between the castor, which sometimes relieves the spirits of an hysterical female, and the copper which frequently checks the violent distortions of the epileptic.

The great variety in the properties of medicines, will not be easily explained ; and a considerable extent is particularly improper in this slight view, which is rather calculated to rouze and direct physicians, than to conduct them. If these observations are well founded, they will strongly support the alphabetical, botanical, or any arbitrary order

der of describing the virtues of medicines. If any other be allowed, it must be that adopted by Dr. Cullen, whose introductory observations to each class, and the arrangement of individuals under it, are frequently calculated to remove the objections now mentioned. Indeed there are so many positive advantages in his method, though the execution is imperfect, that we only wish to guard it from error, and to conduct it with fewer disadvantages. It is for a time only that we should return to arbitrary methods, and study Linnæus, Lewis, or Bergius: it is only to be more perfect in our elements, before we attempt intricate combinations. We ought
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not to conceal, that some efforts of this kind have been made by a very candid and intelligent author; we mean Dr. Duncan, whose work would have been more perfect, if his materials had been more satisfactory. If his orders are sometimes less useful and interesting, it must be attributed rather to the state of the science, than the deficiencies or errors of the author.

In this pursuit, we ought not to neglect combinations of medicines. From the more ancient physicians we receive little satisfaction, because, in the mass of remedies, we can seldom separate the efficacious from the inert, the useful from the trifling. It is probable that, as usual,

fual, the moderns have fell into the opposite error, and rendered that simple, which would sometimes be more useful, if more complicated. It is not intended to plead, in the most distant manner, for the confused mass which once filled the prescriptions of physicians. On the contrary, the real effects of remedies can only be known, by using them singly and separately; but it is necessary to suggest, that the practitioner should not consider this, as the acmè of his art. If compounds have really different virtues, they should be investigated, and properly employed; so that even the apparently heterogeneous mixture of folly or fancy, if its virtues have

have not been tried, should not be contemptuously neglected. Dovar's drastic purge, his sudorific powder, Fuller's balsamic pills, and some other useful remedies are striking proofs of the different power of compounds.

It is also probable, that external applications have not been sufficiently attended to. In the ileus, every medicine is rejected. In some irritable habits, emetics produce violent disorders ; and, when poisons have been taken into the stomach, we are fearful of increasing the irritation, though oil and warm water have little effect in discharging its contents. If it be true, that hellebore applied to issues has produced

duced an evacuation of the intestinal canal, it is probable, that when used in a fomentation to the bowels, it would be more certainly effectual. If it be true, that common groundsel, applied to the stomach, will produce vomiting, it may be frequently useful, to those who can, with difficulty, bear any medicine of that kind ; or, as in the former instance, where we fear to add another irritating substance. There are other instances of this sort ; but this is not the proper place to enlarge on them.

These few observations may not be thought impertinent, in a subject first suggested by an attentive consideration of the *Materia Medica.*

ca. At some future period, they may be enlarged ; so as to be more worthy of attention. In this curious age, it will probably be of service to check, rather than to excite ; to step forward to the eager projector, and with a calm insinuating voice to restrain his ardor. “ Do not be too impatient, in your attempts to improve : examine the resources in your hands : enquire into their defects, and learn whether your boasted novelty can claim greater virtues, or be disgraced by fewer faults. If it be the same, let it not be encouraged, only because it is procured with difficulty and danger, or because it is now first introduced. If it be worse, reflect
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that your seducing promises may endanger the life of a valuable citizen, or an useful member of society. Above all, reflect that the reputation which you seize by violence, is the transitory gleam which will soon vanish, and leave you in your former obscurity ;—that the only reputation really desirable, is that solid, well-grounded confidence, which, as it is not the effect of a momentary bubble, will be proportionably more durable : a reputation not founded on the credit of a fallacious remedy, but the consequence of those offices of skill and humanity, which add a dignity to the physician and the man.”

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Remonstrances and reason will, perhaps, have, in this instance, an equal effect, and be listened to with indifference, or soon forgotten. New remedies will still be offered ; we shall still expect miracles, and be repeatedly deceived. It might add some efficacy to this tract, if the *Materia Medica* were examined in all its varieties with care and attention, with a coolness of investigation, and accuracy of discernment ; so that while every source of information is impartially attended to, even the most respectable is rigidly scrutinized. Truth should be distinguished from doubt, and probability from mistake, as far as experience has already led us.

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In this investigation, we should clearly see our own negligence and errors, while the result would be, a cautious reserve, or a rational scepticism, when new remedies are proposed. The vast extent of the subject would be no rational objection, except to the labor of the undertaking, for facts are easily distinguished from opinions, and mankind only dispute about the latter. Yet even opinions should be regarded, since in medicine, there are few undisputed truths ; and the controversies of pedants, and empirics, as well as those of attentive and rational physicians, should not be neglected. But the result only may be recorded, with proper reference to

the original authors. In this way a valuable mass may be accumulated, not indeed, with little labor, but with much information; not enormous in bulk, but rich in matter. If this work be attempted by able hands, we shall receive great satisfaction from it; if it be not, its utility may be discerned by an inferior execution.

It is now necessary to conclude, lest what was intended for a sketch, should become a volume, and the running wheel produce an hog-shead, when we promised only a pipkin. This subject may probably, at some future period, be extended; and what was proposed only to be a floating sheet, assume a more respect-

respectable form. "But we are ashamed to be instructed by those with whom we are not acquainted." True: yet the author and the reader must, for a time, continue to be strangers to each other. If a more intimate acquaintance promises greater entertainment, the mask may drop, and what was begun in obscurity, be continued in open day.

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